

Office Action Summary	Application No. 10/509,992	Applicant(s) CHELLE ET AL.	
	Examiner Jason D. Mitchell	Art Unit 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 March 2010 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>20100527</u> . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

This action is in response to an amendment filed on 3/2/10.

Claims 1-9 are pending in this application.

Response to Arguments

The Drawings

The amendments to the drawings are sufficient to overcome the previous objections which are consequently withdrawn.

Rejections Under 35 USC 112 2nd

While the amendments to the claims have overcome some of the previous 35 USC 112 2nd rejections, they do not overcome all of them and introduce additional issues (detailed below). Consequently, claims 1-9 remain rejected under 35 USC 112 2nd.

Rejection under 35 USC 103(a)

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

To the extent that some of the arguments remain relevant to the new grounds of rejection, they are addressed below.

In the 2nd par. on pg. 13, the applicants state:

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TARUISHI does not disclose the use of capture interfaces associated to each class of generic objects.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Further, it is noted that the claims only very broadly describe the "capture interfaces". The examiner's best understanding is that this limitation is directed to some means by which a developer can communicate and/or convert the attributes to or into the executable form. Both Taruishi and the newly applied Blowers disclose similar functionality (Taruishi col. 11, lines 1-11 "the programmer inputs a definite name ... the name ... is registered on Step Table 30a and the process contents ... are registered on Expression Table 30"; Blowers e.g. col. 2, lines 53-55 "The user ... sets variables that the machine vision tools require interactively").

In the 5th and 6th par. on pg. 13, the applicants state:

ETTRITCH et al. disclose a method to convert report program language (RPG) into object-oriented source code (e.g., java) to generate Web applications. First, it should be emphasized that the word "class" used in ETTRITCH et al. designates in reality the methods" used in object oriented languages.

In addition, ETTRITCH et al. indisputably does not disclose the step of transcribing objects using a capture interface associated to a class of object.

First in response to applicant's arguments Ettritch does not disclose "the step of transcribing objects", it is noted that Ettritch is not relied upon to teach this limitation.

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413,

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208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Further it is not clear why the applicant believes Ettritch's reference to classes should be read as only referring to the methods of the class instead of the class as a whole. Nor is it clear why this would be considered relevant to the rejection.

Claim Objections

Claim 5 is objected to because of the following informalities: Claim 5 recites "a list of information contained in each file and list of access indices". It is believed this would be better written as "a list of information contained in each file and a list of access indices". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 does not clearly describe the structural and/or functional aspects of the method for which the applicants seek protection. For example, the applicant appears to use multiple terms to describe the same structural and or functional aspects of the claimed method. For example, the claim recites:

breaking down each task into sub-blocks of tasks, until all actions of the process are described using at least one diagram composed of components including a root,

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branches, nodes and leaves, whereby each of the components is represented by an action corresponding to a generic object of an attributing class;

This language does not make it clear what functional and/or structural aspects of a development environment are involved in the "breaking down" step. For example, it is not clear if the tasks and sub-blocks of tasks are intended to describe the same aspects of the method as the claimed components. Nor is it clear how the claimed components can simultaneously represent actions ("all actions ... are described using at least on diagram composed of components") and be represented by actions ("each of the components is represented by an action"). The claim presents a number of other, similar, areas of confusion (e.g. it appears "transcribing each object of each diagram" would be better written as "transcribing each component of each diagram"). Accordingly, the applicants are encouraged to contact the examiner with any questions.

This lack of clarity, in large part, renders a detailed examination of the particular limitations impossible. For the purposes of this examination the claims will be considered using the examiner's best understanding of the limitation.

Claims 2-9 each depend, directly or indirectly, from claim 1 and are likewise rejected.

Claim 2 recites "launches a complete processing cycle that is located at a remote location of a tree structure that corresponds to at least one diagram and, once said processing cycle is completed, returns to its starting point". It is not clear what the

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applicant intends to claim with this limitations. For example, what constitutes a “complete processing cycle” and is the “remote location” remote from the “tree structure” or is the “tree structure” located on the “remote location”. Further, by not tying what appears to be a standard remote function call to a specific object employed by the method, the applicants have failed to fully describe the desired functionality provided by or structure employed in the method.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,841,656 to Taruishi (Taruishi) in view of US 6,298,474 to Blowers et al. (Blowers) in view of US 6,467,079 to Ettritch et al. (Ettritch).

Regarding Claim 1:

A method for generating application software for managing a process, said method implementing a system software that is common to all of the application software generated by said method, said method comprising: ...

This appears to describe a method for generating software applications wherein multiple different software applications will share or make use of some shared software code.

Taruishi, Abstract "A programming system for sequence control ... generating an execution program that is executable by the control unit"

... cybernetically representing said process in a set for tasks and in relationships between the tasks; ...

It is assumed here that the term cybernetically is intended to describe a user acting in conjunction with a programmed computer to define the application software. However, this is not a term commonly used in the art.

Taruishi Abstract "inputting in order the functional symbols along with process contents"

... breaking down each task into sub-blocks of tasks, until all actions of the process are described using at least one diagram composed of components including a root, branches, nodes and leaves, whereby each of the components is represented by an action corresponding to a generic object of an attributing class; ...

This appears to further describe the user design stage, wherein the user details the functionality of the application process at a finer level of granularity by 'drawing' a tree like diagram. It is further believed this second use of the term 'action' refers to the use of pre-programmed objects (likely represented by an icon) which can be placed in the work area in order to build the tree structure.

Taruishi's disclosed user development actions (col. 10, lines 19-24 "generating a sequential diagram"; col. 10, lines 12-18 "Thirteen kinds of functional symbols 26") do not explicitly disclose the developer defining the program at progressively finer levels of granularity (i.e. "breaking down each task into sub-blocks of tasks")

Blowers discloses development of a software application including breaking does each task into sub-blocks of tasks (e.g. col. 8, lines 64-67 "Graphical representations or icons are selected from the tool boxes of FIG. 5 which correspond to desired functional tasks and are linked into the tree structure of FIG. 6"). It would have been obvious to substitute Blowers "tree" based design methodology for Taruishi "sequential flow", because "a tree hierarchy ... allows top-down program development, thereby adapting to the user's thinking" (see e.g. Blowers col. 2, lines 56-62).

... transcribing each object of each diagram into an attributed generic object by capturing data in predetermined formats associated with said attributes by using a capture interface associated to each class of generic object; ...

This appears to describe generating a source code representation of at least part of the tree structure, wherein data fields defining the attributes are set by the user in the iconic representation of the task or action.

Taruishi col. 11, lines 1-11 "the programmer inputs a definite name ... the name ... is registered on Step Table 30a and the process contents ... are registered on Expression Table 30" (alternately see Blowers e.g. col. 2, lines 53-55 "The user ... sets variables that he machine vision tools require interactively").

... automatic precompiling to verify that the attributed objects required for an operation logic of the application are present and are supplied appropriately in terms of syntax; ...

This appears to describe the programmed computer processing the tree structure or more specifically the source code representation of the tree structure to ensure that all necessary data values have been entered by the user.

Blowers teaches that the tree structure requires the developer to enter variables or attributes (see e.g. col. 9, lines 7-10 "Parameters are configurable on each of the tasks where the parameters control the way the function generates results), but does not explicitly describe a separate precompilation step for checking these attributes.

Ettritch teaches a precompilation step to verify that the syntax of the code (col. 7, lines "[the] compiler ... checks the syntax of the code and generates an intermediate language"). Note that proper syntax requires that all required values be properly set.

It would have been obvious to include such a precompilation test (e.g. Ettritch col. 7, lines 9-12 "checks the syntax of the code") when generating code from the diagram taught by Taruishi and Blower (Taruishi col. 11, lines 29-41 "the program for sequence control is compiled"; Blowers col. 9, lines 7-10 "Parameters are configurable on each of the tasks") in order to ensure all required variables have been properly set (Blowers col. 2, lines 53-55 "variables that the machine vision tools require").

... automatic compiling during which data description of the attributed objects are integrated and are assembled with the system software to produce an executable application software; and ...

This appears to describe the compilation of the, now checked, source code representation of the tree structure to generate an executable representation.

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Taruishi discloses this (col. 11, lines 29-41 "the program for sequence control is compiled").

... executing executable software of the application.

This appears to describe execution of the executable representation.

Taruishi discloses this (col. 11, lines 48-52 "transmits the previously generated execution program ... to control unit 3").

Regarding Claim 2: The rejection of claim 1 is incorporated; further Taruishi discloses during the object transcribing stage, at least one action launches a complete processing cycle that is located at a remote location of a tree structure that corresponds to at least one diagram and, once said processing cycle is completed, returns to its starting point, wherein local code makes a call to remote code which returns to the local code upon completion (col. 14, lines 7-15 "the answer back process ... can be described by a single functional symbol").

Regarding Claim 3: the rejection of claim 1 is incorporated; further Taruishi discloses during the executing stage the executable application software implements a library for managing a sequence of events corresponding to the above-mentioned at least one diagram, whereby said library constitutes an automaton that manages the sequence of events of the processes and executes operations that check them, whereby the sequences of events of the operations are defined in an application referential, by

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means of the method, by describing actual data flows (col. 12, lines 28-35 "the execution of a task is handed over to the interpreter"; col. 12, lines 57-63 "in the step execution in the conditional branching step ... setting the next jumping destination at PP").

Regarding Claim 4: The rejection of claim 1 is incorporated; further Taruishi discloses during the compiling stage or the executing stage, the method employs an engine that includes an executive that is responsible for recognizing a hardware and communication configuration (col. 11, lines 32-41 "compiled ... with the structure having instruction word length, ... and connection information comprehensible to control unit 3"; col. 12, lines 57-63 "in the step execution in the conditional branching step ... setting the next jumping destination at PP").

Regarding Claim 5: The rejection of claim 4 is incorporated; further Taruishi discloses the engine manages one or more databases according to a data file descriptor that is provided by an application referential comprising a list of information contained in each file and [a] list of access indices, wherein each of these indices is a list of fields, and links between multiple encodings of a single item in multiple services, multiple sites, or multiple companies (Fig. 6, Location Table 30b, Step Table 30a; Expression Table 30c).

Regarding Claim 6: The rejection of claim 5 is incorporated; further Taruishi discloses the databases are synchronized according to a schedule that is determined by the

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diagram, upon demand, or before certain predefined events (col. 10, lines 53-56

“Sequence table 30 ... is updated whenever the editing ... is performed while maintaining their mutual relationship”).

Regarding Claim 7: The rejection of claim 1 is incorporated; further Taruishi discloses the transcribing each object stage includes, for programming each action:

i) a naming stage during which a name is given to said action (col. 11, lines 1-7 “the programmer inputs a definite name”);

ii) a function defining stage, during which said action is identified with a task (col. 11, lines 1-7 “the programmer inputs ... the definite processing contents”); and

iii) an information defining stage during which the information that will be processed in the action is identified (col. 11, lines 14-16 “the designation and the input operation of the process contents”).

Regarding Claim 8: The rejection of claim 7 is incorporated; further Taruishi discloses the compiling stage replaces the action name that is given by the transcriber during the naming stage with an index in a task table (col. 11, lines 35-41 “for each kind of functional symbols 26 that are set for applicable Step No.”; col. 11, lines 42-43 “step object6 portion 16a contains pointer information of relating expression object portion 16b”).

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Regarding Claim 9: The rejection of claim 1 is incorporated; further Taruishi discloses during the representing stage and transcribing stage, said at least one diagram corresponds to at least one tree structure in which the nodes and leaves, where the code is implemented, are made up of actions, whereby return values of these actions determine movement in the tree structure (Fig. 8, display area 27a; col. 12, lines 57-63 "in the step execution in the conditional branching step ... setting the next jumping destination at PP").

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571)272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bullock Lewis can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason D. Mitchell/
Primary Examiner, Art Unit 2193